

[JP,10-183200,A(1998)]

FULL CONTENTS CLAIM + DETAILED DESCRIPTION TECHNICAL FIELD
PRIOR ART EFFECT OF THE INVENTION TECHNICAL PROBLEM MEANS
OPERATION EXAMPLE

[Translation done.]

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Notes:

1. Untranslatable words are replaced with asterisks (***)
2. Texts in the figures are not translated and shown as it is.

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CLAIM + DETAILED DESCRIPTION

[Claim(s)]

[Claim 1] The sterilization cleaning agent which contained 0.01 to 1weight % of the sterilizing component, 10 to 70weight % of the cleaning component, and 29weight % or more of the water soluble polymer to entire volume, and was fabricated in the shape of a sheet.

[Claim 2] The sterilization cleaning agent according to claim 1 which contains 0.01 to 1weight % of a sterilizing component, 10 to 65weight % of a cleaning component, 0.05 to 5weight % of a deodorization component, and 29weight % or more of a water soluble polymer to entire volume.

[Claim 3] The sterilization cleaning agent according to claim 1 or 2 which contains a cellulose system polymer or polyvinyl alcohol as a water soluble polymer.

[Claim 4] As a sterilizing component, 2, 4, and 4'-bird chloro 2'-hydroxy diphenyl ether, The sterilization cleaning agent according to claim 1 to 3 which contains at least 1 component among 4-isopropyl 3-methyl phenol or N-(4-chlorophenyl)-N'-(3, 4-dichlorophenyl) urea.

[Claim 5] The sterilization cleaning agent according to claim 2 to 4 which contains the extract or carbonization thing of the department vegetation of a camellia as a deodorization component.

[Claim 6] The sterilization cleaning agent according to claim 1 to 5 characterized by containing further the surface active agent which assumes paste state 0.05 to 2% to entire volume as a dissolution assistant in ordinary temperature.

[Claim 7] Contain 2, 4, and 4'-bisdichloro 2'-hydroxy diphenyl ether as a sterilizing component, and as a dissolution assistant The sterilization cleaning agent according to claim 6 characterized by containing the polyoxyethylene polyoxypropylene glycerol oxide type surface active agent which assumes paste state 0.05 to 2% to entire volume in ordinary temperature.

[Detailed Description of the Invention]

[0001]

[Industrial Application] This invention relates to the sterilization cleaning agent fabricated in the shape of [which is used as business use or an object for individuals] a sheet.

[0002]

[Description of the Prior Art] Most generally soap has been conventionally used as cleaning agents, such as a hand and a finger. The liquid detergent has spread to many [in the cases of carrying out common use] soap from the come thing which are many things, such as a shampoo and rinse, and uses the thing of exclusive use [an individual] in recent years also including soap and more than which what is called personal youth how to be dealt with increased. Since a liquid comes out each time, the liquid detergent fits the personal youth. Originally, it is used in order to make the bodies, such as a hand and a finger, clarification, but soap and a liquid detergent may be used for sterilization or the high disinfection effect, expecting. Although there are the medicated soap and medicinal liquid soap containing a germicide in this, the former is unsuitable for a personal youth. On the other hand, most components are water, since the addition concentration of the germicide which can be blended is limited, it may be polluted by various germs and, as for medicinal liquid soap, antiseptics are added. And in many cases, a lot of [far] antiseptics than the germicide used for medical use are needed. Therefore, although medicinal liquid soap fits a personal youth, since a lot of antiseptics are blended in addition to the germicide required for an original bactericidal effect, when medicinal liquid soap is used, a user will be exposed to drugs unnecessary originally.

[0003] Moreover, any type of medicated soap and medicinal liquid soap is always inconvenient to a cellular phone, and when required, there is demerit which cannot be used immediately.

[0004] The paper soap (JP,51-44524,B) which applies as a sheet type cleaning agent on the detergent composition soluble fiber which carried out thermofusion, or a film, and comes to carry out cooling solidification, The detergent film on which a non-ion type surface active agent and an alkylene maleic anhydride copolymer are made to come to react (JP,57-47239,B), Although the sheet-like cleaning agent (JP,55-75500,A) to which the cleaning agent was made to adhere is in the punching sheet which consists of a water soluble polymer substance, a water-soluble nonwoven fabric, or a water dispersibility nonwoven fabric, all are what only searched for detergency. There was nothing aiming at disinfection or high disinfection nature grant.

[0005]

[Problem(s) to be Solved by the Invention] The technical problem which this invention tends to solve does not need addition of unnecessary antiseptics for an original bactericidal effect, but it is that personal youth nature offers the cleaning agent in which it

is high and the sterilization which was suitable also as portable or the disinfection effect is high.

[0006]

[Means for Solving the Problem] To the shape of a sheet, it dries and the sterilization cleaning agent of this invention attains the above-mentioned purpose discharge and by producing a sterilizing component and a cleaning component content sheet, after mixing a sterilizing component and a cleaning component in the solution which dissolved or distributed the water soluble polymer.

[0007] That is, in the liquid which dissolved or distributed the water soluble polymer with membrane formation nature, invention according to claim 1 dissolves a sterilizing component and a cleaning component in remaining as it is, or water and a solvent, adds, and relates to discharge and the sterilization cleaning agent obtained by drying uniformly at the shape of an after-mixing sheet.

[0008] Invention according to claim 2 is the sterilization cleaning agent fabricated in the shape of [which is characterized by giving odor eliminating] a sheet by adding 0.05 to 5weight % of a deodorization component.

[0009] Invention according to claim 3 is the sterilization cleaning agent fabricated in the shape of [which is characterized by using a cellulose system polymer or polyvinyl alcohol as a water soluble polymer] a sheet.

[0010] Invention according to claim 4 as a sterilizing component 2, 4, and 4'-bird chloro 2'-hydroxy diphenyl ether, It is the sterilization cleaning agent fabricated in the shape of [which is characterized by containing at least 1 component among 4-isopropyl 3-methyl phenol or N-(4-chlorophenyl)-N'-(3, 4-dichlorophenyl) urea] a sheet.

[0011] Invention according to claim 5 is the sterilization cleaning agent fabricated in the shape of [which is characterized by containing the extract or carbonization thing of the department vegetation of a camellia as a deodorization component] a sheet.

[0012] Invention according to claim 6 is the sterilization cleaning agent fabricated in the shape of [which is characterized by containing the surface active agent which assumes paste state 0.05 to 2% to entire volume as a dissolution assistant in ordinary temperature] a sheet.

[0013] Invention according to claim 7 contains 2, 4, and 4'-bird chloro 2'-hydroxy diphenyl ether as a sterilizing component, and as a dissolution assistant It is the sterilization cleaning agent fabricated in the shape of [which is characterized by containing the polyoxyethylene polyoxypropylene glycerol oxide type surface active agent which assumes paste state 0.05 to 2% to entire volume in ordinary temperature] a sheet.

[0014]

[Function] The sterilization cleaning agent fabricated in the shape of [of this invention] a sheet is a sheet-like agent containing a sterilizing component, a cleaning component, and a water soluble polymer, it dissolves in water easily, and acts as a cleaning agent, and demonstrates a germicidal action or a high disinfection operation by the effect of the sterilizing component to contain.

[0015] Since the sterilization cleaning agent of this invention has become sheet-like, it is possible for every person to use one separate sheet at a time each time, and it is a high sterilization cleaning agent of personal youth nature. Moreover, since the sheet itself is sterilized and a moisture content also becomes very low in order to pass through a drying

stage at the time of membrane formation, antiseptics of this article is high and it does not need to add antiseptics further.

[0016] 0.01 to 1weight % of a sterilizing component is blended with the sterilization cleaning agent of this invention, and a bactericidal effect or the high disinfection effect is demonstrated to it. Although especially a sterilizing component is suitably determined according to character, such as a water soluble polymer which is not limited and is used for this invention, a cleaning component, and other combination components, For example, quarternary ammonium salt, such as a benzalkonium chloride and cetylpyridinium chloride, 2, 4, and 4'-bird chloro 2'-hydroxy diphenyl ether, 4-isopropyl 3-methyl phenol, N-(4-chlorophenyl)-N'-(3, 4-dichlorophenyl) urea, Sterilizing components, such as iso thiazoline compounds, such as 5-chloro 2-methyl 4-iso thiazoline 3-ON and 2-methyl 4-iso thiazoline 3-ON, can be raised. They are 2, 4, and 4'-bird chloro 2'-hydroxy diphenyl ether and 4-isopropyl 3-methyl phenol especially, Or as for nonionic sterilizing components, such as N-(4-chlorophenyl)-N'-(3, 4-dichlorophenyl) urea, compatibility with a water soluble polymer or a cleaning component is used suitably well. Moreover, the compounding concentration of a sterilizing component is suitably determined that it will have a necessary bactericidal effect or the necessary high disinfection effect according to the sterilization effect of the sterilizing component used.

[0017] The cleaning component blended ten to 70weight % in the sterilization cleaning agent of this invention not only can remove soils, such as a hand and a finger, but can heighten the disinfection effect. Although not limited especially as a cleaning component blended, vegetation or animal fat and oil is saponified. Anionic surface active agents, such as becoming soap, N-acyl taurine salt, N-acylamino acid chloride, and ether carboxylate, Amphoteric surface active agents, such as nonionic surface active agents, such as polyoxyethylene alkyl ether, polyoxyethylene fatty acid ester, sorbitan fatty acid ester, and polyoxyethylene polyoxypropylene glycol ether, and acetic acid betaine, imidazolinium betaine, etc. are used.

[0018] In the sterilization cleaning agent of this invention, it became possible by blending a water soluble polymer 29weight % or more to fabricate in the shape of a sheet. The water soluble polymer used here will be limited especially if there is membrane formation nature. Although there is no **, cellulose systems, such as carboxymethylcellulose, methyl cellulose, and butyl cellulose, or polyvinyl alcohol, polyethylene oxide, a pull run, xanthan gum, chitosan, etc. can be illustrated.

[0019] In the sterilization cleaning agent of this invention, in order to, raise a germicide or the compatibility over this sheet agent of an additive in addition to this and to maintain a dissolution state stably, you may add the surface active agent which assumes paste state in ordinary temperature as a dissolution assistant. As the surface active agent which assumes paste state in the ordinary temperature used at this time, A polyoxyethylene polyoxypropylene glycerol oxide type (polypropylene glycol ether type), According to a germicide or the component added in addition to this, it can be used out of surface active agents, such as an alkyl ether type, an alkylphenyl ether type, an alkylamine type, an alkylamide type, and a sorbitan derivative type, and polyethylene glycol (PEG), choosing suitably. When 2, 4, and 4'-bird chloro 2'-hydroxy diphenyl ether is used as a germicide, As a dissolution assistant, the polyoxyethylene polyoxypropylene glycerol oxide type (polypropylene glycol ether type) surface active agent and polyethylene glycol which assume paste state in ordinary temperature are used suitably.

[0020] You may blend perfume, a pigment, a moisturizer, oils, a solvent, a plasticizer, etc. with the sterilization cleaning agent of this invention suitably.

[0021]

[Example] Below based on a concrete operation sequence, the sterilization cleaning agent fabricated in the shape of [of this invention] a sheet is explained still in detail.

[0022] (Operation sequence 1) 100g of purified water -- 1 of 9g of soap bases, polyvinyl alcohol 10g, 2, and 4, and 4'-bird chloro 2'-hydroxy diphenyl ether, and 1g of 3-butylene glycol solutions (2-weight % solution) After dissolving and distributing and mixing uniformly one by one, it applied in the shape of a sheet so that it might be set to thickness 100um on a glass plate, and it dried for 15 minutes at 85 degrees C, and the sheet-like sterilization cleaning agent of the work example 1 was obtained.

[0023] (Work example 2) They are 12g of soap bases, and methyl cellulose 7g to 100g of purified water, 1 of 2, 4, and 4'-bird chloro 2'-hydroxy diphenyl ether, and 1g of 3-butylene glycol solutions (2-weight % solution) one by one After dissolving and distributing and mixing uniformly, it applied in the shape of a sheet so that it might be set to thickness 100um on a glass plate, and it dried for 15 minutes at 85 degrees C, and the sheet-like sterilization cleaning agent of the work example 2 was obtained. [0024] (Work example 3) They are 6g of soap bases, and methyl cellulose 11g to 100g of purified water, 1 of 2, 4, and 4'-bird chloro 2'-hydroxy diphenyl ether, 1g of 3-butylene glycol solutions (2-weight % solution), 2g of green tea carbonization things were applied in the shape of a sheet so that it might be set to thickness 100um on a glass plate, after dissolving and distributing and mixing uniformly one by one, and they were dried for 15 minutes at 85 degrees C, and the sheet-like sterilization cleaning agent of the work example 3 was obtained.

[0025] (Work example 4) They are 9g of soap bases, polyvinyl alcohol 10g, and 1g of isoprene glycol solutions (0.5-weight % solution) of N-(4-chlorophenyl)-N'-(3, 4-dichlorophenyl) urea to 100g of purified water. After dissolving and distributing and mixing uniformly one by one, it applied in the shape of a sheet so that it might be set to thickness 100um on a glass plate, and it dried for 15 minutes at 85 degrees C, and the sheet-like sterilization cleaning agent of the operation sequence 4 was obtained.

[0026] To 100g of purified water, 7.76g of soap bases, methyl cellulose 11g, (Work example 5) 1 of 2, 4, and 4'-bird chloro 2'-hydroxy diphenyl ether, 1g of 3-butylene glycol solutions (2-weight % solution), 0.2g of green tea carbonization things, and Pluronic P84 (polyoxyethylene polyoxypropylene glycerol oxide type surface active agent) 0.04g After dissolving and distributing and mixing uniformly one by one, it applied in the shape of a sheet so that it might be set to thickness 100um on a glass plate, and it dried for 15 minutes at 85 degrees C, and the sheet-like sterilization cleaning agent of the work example 5 was obtained.

[0027] The work example and comparative example of the presentation which are shown in Table 1 like the above-mentioned work example were produced, and appearance observation, the washing examination, the antibacterial examination, the deodorization examination, and the stability test were done.

[0028]

[Table 1]

成分表

		水分を除いた各成分の含有量（重量％）					
		殺菌成分 ^a	石鹼素地	ポリビロース	緑茶抽出物	1,3- ブレンダリコール	フルロニック P-84
実 施 例	1	0.01	60	35	0	4.99	0
	2	0.01	65	30	0	4.99	0
	3	0.01	20	75	0	4.99	0
	4	0.1	50	45	0	4.9	0
	5	1	50	45	0	4	0
	6	0.1	50	44	1	4.9	0
	7	0.1	50	40	5	4.9	0
	8	0.1	50	45	0.05	4.85	0
	9	0.1	50	45	0	4.7	0.2
	10	0.1	50	45	1	3.5	0.4
比 較 例	1	0.001	50	45	0	4.999	0
	2	0	5	90	0	5	0
	3	0.1	85	10	0	4.9	0

a. 2、4、4'-トリクロロ-2'-ジドロキシジフェニルエーテル

[0029] 1. The sheet-like sterilization cleaning agent 1 sheet of 5x7cm of washing examinations was used, the hand was washed with tap water, and detergency was investigated. The acceptance criterion is as follows.

O : it foams well and sufficient cleaning effect is accepted.

** : Although foaming is not enough, a temporary cleaning effect is accepted.

x : It is bad [foaming] deficient in a cleaning effect.

[0030] 2. The fungus liquid which carried out overnight culture of antibacterial examination Staphylococcus aureus and the Escherichia coli by the SCD culture medium was applied to the surface of a SCD agar medium, the sheet-like sterilization cleaning agent 1cm in diameter cut circularly was gently put in the center, it cultivated at 32 degrees C, the existence of the growth inhibition circle was observed, and antibacterial properties were investigated. The acceptance criterion is as follows.

O : the clear inhibition circle was seen.

x : Growth inhibition was not accepted.

[0031] 3. The sheet-like sterilization cleaning agent 1 sheet of 5x7cm of deodorization examinations was used, the hand which attached the smell of raw fish with tap water was washed, and odor eliminating was investigated. The acceptance criterion is as follows.

O : the smell of raw fish disappeared completely or it almost disappeared.

x : The smell of raw fish has not disappeared.

[0032] 3. The stability test test sample was put into the wrapping material of an aluminum deposition film, it saved for one month at 50 degrees C, and form and a change in appearance were investigated. The acceptance criterion is as follows.

O : it is changeless in form and appearance.

x: Form and appearance have change.

[0033]

[Table 2]

実施例及び比較例の各試験結果

		形 状	溶解性	洗浄性	抗菌性	消臭性	安定性
実 施 例	1	シート状	良好	○	○	×	○
	2	シート状	良好	○	○	×	○
	3	シート状	良好	△	○	×	○
	4	シート状	良好	○	○	×	×
	5	シート状	良好	○	○	×	×
	6	シート状	良好	○	○	○	×
	7	シート状	良好	○	○	○	×
	8	シート状	良好	○	○	○	×
	9	シート状	良好	○	○	×	○
	10	シート状	良好	○	○	○	○
比 較 例	1	シート状	良好	○	×	×	○
	2	シート状	不良	×	×	×	○
	3	シート形成せず	良好	○	○	×	—

[0034] As shown in Table 2, since water soluble polymer contents were insufficient, a sheet was not formed by a comparative example 3. On the other hand, in the operation sequences 1-10, all became sheet-like and solubility was also satisfactory. Moreover, the cleaning effect was [comparative example / 2 / of the 5 weight % content of a soap base / the operation sequences 1-10] clearly low as a cleaning component. To antibacterial properties having been accepted in the operation sequences 1-10 which have added the sterilizing component, the sterilizing component was not added or antibacterial properties were not accepted by less than 0.01% of comparative examples 1 and 2. Odor eliminating was observed by work examples 6-8, and 10. When the work examples 1-10 and the comparative examples 1 and 2 in which the sheet was formed were saved for one month at 50 degrees C and the stability in high temperature service was investigated, it is a sterilizing component. In the work examples 4-8 which contain 2, 4, and 4'-bird chloro 2'-hydroxy diphenyl ether 0.1% or more, the deposit of a germicide crystal was seen and the problem was in the stability under high temperature service. or [containing 2, 4, and 4'-bird chloro 2'-hydroxy diphenyl ether less than 0.1% as a sterilizing component] -- or [the operation sequences 1-3 which are not contained and comparative examples 1 and 2] Even if it is changeless in form and appearance even if saved under high temperature service, and it contains 2, 4, and 4'-bird chloro 2'-hydroxy diphenyl ether 0.1% or more as a sterilizing component Even if saved under high temperature service in the work examples 9 and 10 containing the polyoxypropylene glycerol oxide type surface active agent which assumes paste state in ordinary temperature, it was changeless in form and

appearance.

[0035] 4. The operational suitability test from which a hand is washed using 5x7cm sheet-like sterilization cleaning agent 1 sheet about the operation sequence 4 and comparative examples 1 and 2 of the operational suitability test table 1 was done. A result is shown in Table 3.

[0036]

[Table 3]

実用試験

		洗浄性	除菌効果 ^a
実施例	4	シートの溶解性、泡立ちがよく洗浄性は良好であった。	使用後、手のひらの細菌数は、0であった。
比較例	1	シートの溶解性、泡立ちがよく洗浄性は良好であった。	使用後、手のひらに若干の細菌数が認められた。
	2	シートの溶解性はよいが、泡立ちが悪く、洗浄性は良くなかった。	使用後、手のひらに若干の細菌数が認められた。

a. フードスタンプ（日水製薬[®]製）で測定。

[0037] As shown in Table 3, even if the solubility of a sheet and detergency were good and measured the number of microorganism of the palm with the food stamp, bacteria were not accepted in the operation sequence 4. On the other hand, in the comparative example 2, detergency was bad and the comparative examples 1 and 2 of the disinfection effect were low.

[0038]

[Effect of the Invention] According to this invention, since it is not bulky even if it puts into a bag etc. and carries by the shape of a sheet, and there is no addition of unnecessary antiseptics etc. in an original bactericidal effect, it is safe, since it can moreover use one sheet at a time at once, personal youth nature is high, and moreover, the high sterilization cleaning agent of sterilization and the disinfection effect is offered.

[Translation done.]